

DTIC FILE COPY

DEPARTMENT OF THE ARMY

JUSTIFICATION OF ESTIMATES FOR FY 1991 BUDGET

SUBMITTED TO CONGRESS

JANUARY 1990

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PROCUREMENT AMMUNITION, ARMY

AIRCRAFT	MISSILES
WEAPONS AND TRACKED COMBAT VEHICLES	OTHER
AMMUNITION	

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PROCUREMENT OF AMMUNITION, ARMY

Section 1:

Budget Appendix Extract

Appropriation Language

FY 1991 Program and Financing Schedule

FY 1991 Object Classification Schedule

Accession For	
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Justification	
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STATEMENT "A" per Bill Schultz  
SAM-1-BY-P  
TELECON

3/6/90



PROCUREMENT OF AMMUNITION, ARMY

APPROPRIATION LANGUAGE

For construction, procurement, production, and modification of ammunition, and accessories therefore; specialized equipment and training devices; expansion of public and private plants, including ammunition facilities authorized in military construction Authorization Acts or authorized by section 2854, title 10, United States Code, and the land necessary therefor, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes; \$1,424,400,000, to remain available for obligation until September 30, 1993.

29 Jan 90

Procurement of Ammunition, Army  
Program and Financing ( in thousands of dollars ) FISCAL YEAR 1987

		Budget plan (amounts for PROCUREMENT actions programmed)	Obligations
Identification code	21-2034-0-1-051		
1989 actual	1990 est.	1991 est.	1990 actual 1991 est.
Program by activities:			
Direct programs:			
00.0101      Ammunition	56.494		
00.0201      Ammunition production base support		7.244	
Total	10.0001	63.728	
Financing:			
Offsetting collections from:			
11.0001      Federal funds(-)		2.226	
14.0001      Non-Federal sources(-)		76	
17.0001      Recovery of prior year obligations		-13,329	
Unobligated balance available. start of year:			
21.4002      For completion of prior year budget plans		-52,749	
21.4009      Reprogramming from/to prior year budget plan		48	
25.0001      Unobligated balance lapsing		48	
Budget authority	39.0001		

Procurement of Ammunition, Army  
Program and Financing (in thousands of dollars) FISCAL YEAR 1988

29 Jan 90

		Budget Plan (Amounts for PROCUREMENT actions programme)		Obligations	
		1989 actual	1990 est.	1989 actual	1990 est.
Identification code	21-2034-0-1-051				
Program by activities:					
Direct program:					
Ammunition				87,773	36,947
Ammunition production base support				22,816	20,690
Total direct program				110,589	57,637
Reimbursable program				342	6,182
10.0001 Total				110,931	63,819
Financing:					
Offsetting collections from:					
Federal funds (-)				762	
Trust funds (-)				10	
Non-Federal sources (-)				7	
17.0001 Recovery of prior year obligations				-28,455	
Unobligated balance available, start of year:					
21.4002 For completion of prior year budget plans				-147,074	-63,819
Unobligated balance available, end of year:					
24.4002 For completion of prior year budget plans				63,819	
39.0001 Budget authority					

Procurement of Ammunition, Army  
Program and Financing (In Thousands of dollars) FISCAL YEAR 1989

29 Jan 90

		Budget Plan (Amounts for PROCUREMENT actions by program)		Obligations	
Identification code	21-2034-0-1-051	1989 actual	1990 est.	1989 actual	1990 est.
<b>Program by activities:</b>					
<b>Direct program:</b>					
00.0001	Ammunition	1,741,548		1,599,975	97,586
00.0201	Ammunition production base support	270,787		264,310	7,377
00.9101	Total direct program	2,020,335			7,103
01.0101	Reimbursable program		37,901	1,864,285	104,963
10.0001	Total	2,050,236		35,836	2,065
				1,900,121	107,028
					51,087
<b>Financing:</b>					
<b>Offsetting collections from:</b>					
11.0001	Federal funds (-)	-33,710		-33,710	
13.0001	Trust funds (-)	-3,199		-3,199	
14.0001	Non-Federal sources (-)	-992		-992	
21.4002	Unobligated balance available, start of year: For completion of prior year budget plans				
24.4002	Unobligated balance available, end of year: For completion of prior year budget plans				
39.0001	Budget authority	2,020,335		2,020,335	
				2,020,335	
<b>Budget authority:</b>					
40.0001	Appropriation	2,012,970		2,012,970	
42.0001	Transferred from other accounts	7,365		7,365	
43.0001	Appropriation (adjusted)	2,020,335		2,020,335	

Procurement of Ammunition, Army  
Program and Financing (in Thousands of dollars) FISCAL YEAR 1990

29 Jan 90

		Budget Plan (amounts for PROCUREMENT actions programmed)		Obligations	
		1989 actual	1990 est.	1989 actual	1990 est.
Identification code	21-2034-0-1-051				
Program by activities:					
Direct program:					
00.0101     Ammunition	1,577,163			1,490,078	46,730
00.0201     Ammunition production base support	331,880			313,717	8,782
00.9101     Total direct program		1,909,043			
01.0101     Reimbursable program		40,000			40,000
10.0001     Total		1,949,043			1,843,795
Financing:					
Offsetting collections from:					
11.0001     Federal funds(-)	-28,740			-28,740	
13.0001     Trust funds(-)	-9,700			-9,700	
14.0001     Non-Federal sources(-)	-1,552			-1,552	
Unobligated balance available. Start of year:					
21.4002     For completion of prior year budget plans		-90,000			-105,248
21.4003     Available to finance new budget plans					-90,000
24.4002     Unobligated balance available. End of Year:				105,248	48,726
24.4003     For completion of prior year budget plans		90,000		90,000	
39.0001     Available to finance subsequent year budget					
Budget authority:					
40.0001     Appropriation	2,011,243			2,011,243	
41.0001     Transferred to other accounts (-)	-12,200			-12,200	
41.1201     Transferred to other accounts (unob dals)			-90,000		-90,000
43.0001     Appropriation (adjusted)	1,999,043		-90,000	1,999,043	-90,000

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**Procurement of Ammunition, Army  
Program and Financing (in thousands of dollars) FISCAL YEAR 1991**

		Budget Plan (amounts for procurement actions program)			Obligations		
Identification code	21-2034-0-1-051	1989 actual	1990 est.	1991 est.	1989 actual	1990 est.	1991 est.
<b>Program by activities:</b>							
<b>Direct program:</b>							
00.0101	Ammunition production			1,165,319		1,100,594	
00.0201	Ammunition production base support			259,081		244,728	
00.9101	Total direct program						
01.0101	Reimbursable program			1,424,400		1,345,322	
10.0001	Total			40,000		40,000	
				1,464,400		1,385,322	
<b>Financing:</b>							
<b>Offsetting collections from:</b>							
11.0001	Federal funds(-)			-28,748		-28,748	
13.0001	Trust funds(-)			-9,700		-9,700	
14.0001	Non-Federal sources(-)			-1,552		-1,552	
24.4002	Unobligated balance available end of year: For completion of prior year budget plans					79,078	
40.0001	Budget authority (Appropriation)			1,424,400		1,424,400	

**Procurement of Ammunition, Army  
Program and Financing (in Thousands of Dollars) SUMMARY**

Identification code	21-2034-0-1-051	Budget Plan (amounts for PROCUREMENT actions programmed)				Obligations		
		1989 actual	1990 est.	1991 est.	1989 actual	1990 est.	1991 est.	
<b>Program by activities:</b>								
<b>Direct program:</b>								
00.0101	Ammunition	1,741,548	1,577,163	1,165,319	1,744,232	1,624,611	1,191,311	
00.0201	Ammunition production base support	278,781	331,880	259,081	294,370	341,784	261,620	
00.9101	Total direct program	2,020,335	1,909,043	1,424,400	2,038,602	1,966,395	1,452,931	
01.0101	Reimbursable program	37,901	40,000	40,000	36,178	48,247	40,000	
10.0001	Total	2,058,236	1,949,043	1,464,400	2,074,780	2,014,642	1,492,931	
<b>Financing:</b>								
<b>Offsetting collections from:</b>								
11.0001	Federal funds(-)	-33,710	-28,748	-28,748	-30,722	-28,748	-28,748	
13.0001	Trust funds(-)	-3,199	-9,700	-9,700	-3,169	-9,700	-9,700	
14.0001	Non-Federal sources(-)	-992	-1,552	-1,552	-909	-1,552	-1,552	
17.0001	Recovery of prior year obligations				-41,784			
Unobligated balance available. start of year:								
21.4002	For completion of prior year budget plans				-199,023	-221,934	-156,335	
21.4003	Available to finance new budget plans				-90,000		-90,000	
21.4009	Reprogramming from/to prior year budget plan	-48						
Unobligated balance available. end of year:								
24.4002	For completion of prior year budget plans				221,934	156,335	127,804	
24.4003	Available to finance subsequent year budget	90,000				90,000		
25.0001	Unobligated balance lapsing	48			48			
39.0001	Budget authority	2,020,335	1,999,043	1,334,400	2,020,335	1,999,043	1,334,400	
<b>Budget authority:</b>								
40.0001	Appropriation	2,012,970	2,011,243	1,424,400	2,012,870	2,011,243	1,424,400	
41.0001	Transferred to other accounts (-)		-12,200			-12,200		
41.2201	Transferred to other accounts (unob bal)			-90,000			-90,000	
42.0001	Transferred from other accounts	7,365			7,365			
43.0001	Appropriation (adjusted)	2,020,335	1,999,043	1,334,400	2,020,335	1,999,043	1,334,400	
<b>Relation of obligations to outlays:</b>								
71.0001	Obligations incurred, net				2,039,960	1,974,642	1,452,931	
72.4001	Obligated balance. start of year	3,409,721			3,418,948	3,112,890		
74.4001	Obligated balance. end of year	-3,418,948			-3,112,890	-2,794,821		
77.0001	Adjustments in expired accounts (net)	3,635						
78.0001	Adjustments in unexpired accounts	-41,784						
90.0001	Outlays				1,992,584	2,280,700	1,771,000	

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**Procurement of Ammunition, Army  
Object Classification (in Millions of Dollars) SUMMARY**

		1989 actual	1990 est.	1991 est.
Identification code	21-2034-0-1-051			
Direct obligations:				
Other services:				
125.004 Other	378,424	451,693	415,280	
126.001 Supplies and materials	1,647,327	1,514,702	1,037,651	
131.001 Equipment	12,851			
199.001 Total Direct obligations	2,038,602	1,966,395	1,452,931	
Reimbursable obligations:				
Other services:				
225.004 Other	6,716	7,573	7,523	
226.001 Supplies and materials	29,234	40,724	32,477	
231.001 Equipment	228			
299.001 Total Reimbursable obligations	36,178	48,247	40,000	
999.901 Total obligations	2,074,780	2,014,642	1,492,931	

#### JUSTIFICATION OF FUNDS REQUESTED

The FY 1991 Amended program provides for worldwide training consumption and replaces losses to inventory through FY 1991 funded delivery periods, maintains U. S. Army readiness, buys war reserves through the FY 1994 authorized acquisition objective, and maintains the active ammunition production base at a reduced level. The following table depicts the ammunition program by major categories:

Ammunition Categorization (\$ Millions)	FY 1989	FY 1990	FY 1991
Special	123.2	90.8	80.6
Small Arms	216.5	216.7	171.1
Mortars	75.7	16.3	4.0
Tanks	348.6	329.7	393.9
Artillery	535.7	472.0	209.4
Artillery Fuzes	39.1	53.6	43.4
Mines	140.5	104.7	81.7
Rockets	127.7	154.4	60.1
Other	35.4	36.1	26.5
Miscellaneous	99.1	102.8	94.6
Production Base	278.8	331.9	259.1
Total	2020.3	1909.0	1424.4

The FY 1991 procurement new starts are: one classified project; Simulator, Flash Artillery M24 which provides enhanced training realism; and the Outfit - Cartridge, Actuator 4-Second Delay which cuts parachute reefing lines on equipment drops.

**PROCUREMENT OF AMMUNITION, ARMY**

**Section 2:**

**Budget Activity Justification**

**Activity 1 - Ammunition**

**Activity 2 - Ammunition Production Base Support**

Department of the Army President's Budget Justification	Appropriation PROCUREMENT OF AMMUNITION, ARMY	FY 1991 Amended Budget
Budget Program	(\$ Thousands)	
	Actual FY 1989	Actual FY 1990
Activity 1 - Ammunition		
Direct Budget Plan	\$1,741,548	\$1,577,163
		\$1,165,319

#### Part 1 - PURPOSE AND SCOPE

The FY 1991 Amended President's Budget contains an ammunition program that provides for worldwide training consumption, near-term readiness and combat sustainability, and the acquisition of war reserve stocks. Families of ammunition included in the request are special munitions, small arms, mortars, tanks, artillery fuzes, rockets, mines, and other ammunition items. War reserve ammunition requirements equate to 59 percent of the Activity 1 request.

ITEM BREAKOUT, FY 1991  
(\$ Millions)

TYPE	FY 1991	REMARKS
<b>SPECIAL AMMUNITION (FY 1991 - \$80.6 Million)</b>		
*		The FY 1991 Amended request funds two classified projects (155mm Nuclear Projectile and 155mm Binary Projectile) and procurement of Nuclear Weapons Support Material.
<b>SMALL/MEDIUM CALIBER AMMUNITION (FY 1991 - \$171.1 Million)</b>		
5.56mm Cartridges	52.0	The FY 1991 Amended request funds the M200 Blank, M855 Ball and the M862 Plastic Cartridges. The M200 Blank and the M862 Plastic are training unique while the M855 Ball is the Service round for the M16A2 rifle. The FY 1991 request builds war reserves and supports annual peacetime training.
7.62mm Cartridges	4.2	The FY 1991 Amended request funds the M82 Blank and the M852 Special Match. These rounds are used in the M240, M60, M73, and the M219 Machine Guns. The FY 1991 procurement supports annual peacetime training.
cal .45 Cartridges	.5	The FY 1991 Amended request funds the Wadcutter and Match Grade Cartridges for competitive pistol matches and training.
cal .50 Cartridges	3.1	The FY 1991 Amended request funds the M33 Ball Cartridge for use in the M2, M3, and Caliber .50 Machine Guns. FY 1991 request supports annual peacetime training.
20mm Cartridges	9.9	The FY 1991 Amended request funds the M220 and M55/A2 Target Practice Cartridges for use in the Cobra Gun and Vulcan Air Defense System. FY 1991 request supports annual peacetime training requirements.

**ITEM BREAKOUT, FY 1991 (\$ Millions)**

TYPE	FY 1991	REMARKS
<b>SMALL/MEDIUM CALIBER AMMUNITION (CONT.)</b>		
25mm Cartridges	89.6	The FY 1991 Amended request funds the M919 Armor Piercing Fin Stabilized Discarding Sabot-Tracer (APSDS-T) and M910 Armor Piercing Training ammunition for use in the 25mm M242 Automatic Gun which is mounted on the M2/M3 Bradley Fighting Vehicle System.
30mm Cartridges	9.5	The FY 1991 Amended request funds the M788 Target Practice and M883 High Pressure Test Cartridges. These rounds are for use in the M230 30mm Lightweight Gun for the AH64 Helicopter.
40mm Cartridges	2.3	The FY 1991 Amended request funds the M385A1, M918 and M781 Target Practice rounds and the M922 Dummy. The rounds are used for training and testing on the MK19 Machine Gun, M79 and M203 Grenade Launchers.
<b>MORTAR AMMUNITION (FY 1991 - \$4.0 Million)</b>		
60mm (LWQMS) Cartridges	4.0	The FY 1991 Amended request funds the M722 White Phosphorous (WP) Smoke Cartridge for use in the Light-Weight Company Mortar System in support of the Army's Light Infantry Division. FY 1991 procurement builds war reserve stockpile.

**ITEM BREAKOUT, FY 1991**  
 (\$ Millions)

<b>TANK AMMUNITION (FY 1991 - \$393.9 Million)</b>	<b>TYPE</b>	<b>FY 1991</b>	<b>REMARKS</b>
105mm Tank Ammunition	82.2	The FY 1991 Amended request funds 45,000 Target Practice with Tracer (TP-T) Cartridges in the amount of \$8.7 million; 34,000 Discarding Sabot-Target Practice (DS-TP) Cartridges in the amount of \$6.5 million; and 44,000 M900E1 Armor Piercing Fin Stabilized Discarding Sabot-Tracer (APFSDS-T) Cartridges in the amount of \$67.0 million. The planned FY 1991 procurement builds war reserves of modern tank ammunition and enhances the Army's ability to conduct realistic tank gunnery training in support of readiness objectives.	
120mm Tank Ammunition	311.6	The FY 1991 Amended request funds \$140 million for classified items; \$130.5 million for 177,000 M865 Target Practice Cone Stabilized Discarding Sabot-Tracer (TPCSDS-T) rounds; and \$41.2 million for 43,000 M831 Target Practice-Tracer (TP-T) rounds. This request supports the M1A1 tank fielding by providing enhanced ammunition capable of defeating threat armor and provides for tank gunnery training in support of our readiness objectives.	

ITEM BREAKOUT, FY 1991  
(\$ Millions)

TYPE            FY 1991            REMARKS

**ARTILLERY AMMUNITION (FY 1991 - \$209.4 Million)**

105mm Blank, M395	5.7	The FY 1991 Amended request funds of 181,000 cartridges for use in training exercises, retreat ceremonies, VIP salutes and burial ceremonies.
105mm HERA, M913	15.6	The FY 1991 Amended request funds 34,000 High Explosive Rocket Assisted (HERA) rounds to build war reserve stockpiles. This is a more lethal, extended range artillery cartridge for use with the howitzer deployed with Light Infantry Divisions.
155mm ADAM-S, M731	36.9	The FY 1991 Amended request funds 8,000 155mm Area Denial Artillery Munitions (ADAM-S) M731 projectiles. The ADAM projectile is an artillery delivered mine, which provides the field commander with a quick-reaction defensive or offensive mine system to oppose dismounted enemy forces or mounted armor attacks. The ADAM projectile contains 36 anti-personnel mines. The mines have a self-destruct feature which allows for movement of friendly troops through the mine area after a predetermined period. Funding is required to support war reserve objectives.

**ITEM BREAKOUT, FY 1991**  
(\$ Millions)

TYPE	FY 1991	REMARKS
<b>ARTILLERY AMMUNITION (CONT.)</b>		
155mm Training, M804	32.6	The FY 1991 Amended request funds 203,000 low noise M804 artillery training projectile required to support training in areas with environmental noise limitations.
155mm Baseburner, M864	118.6	The FY 1991 Amended request provides funding to meet war reserve sustainability objectives. This Improved Conventional Munition (ICM) projectile is a dual purpose (DP) anti-armor/antipersonnel round. The round differs from the basic M483 ICM round in that it has extended range capabilities. The FY 1991 procurement of 138,000, projectiles is required to provide field artillery units with extended range necessary to engage and neutralize deep targets.
<b>ARTILLERY FUZES (FY 1991 - \$43.4 Million)</b>		
Fuze, Artillery,	33.0	The FY 1991 Amended request funds 197,000 M732A2 Proximity, fuzes. The M732A2 is the product improvement version of the M732, which makes it compatible for use with the 8-inch Rocket Assisted Projectiles (RAP), 105mm and 155mm projectiles.
Fuze, Artillery, Electronic Time (ET) M767 Electronic Time Superquick (ETSQ) M762	10.4	The FY 1991 Amended request funds testing, training, and war reserve requirements in quantities sufficient to balance with the procurement of associated projectiles. Electronic time fuzes are used with all existing and developmental projectiles in the 105mm, 155mm and 8-inch artillery weapons systems.

**ITEM BREAKOUT, FY 1991  
(\$ Millions)**

<b>TYPE</b>	<b>FY 1991</b>	<b>REMARKS</b>
<b>ROCKETS (FY 1991 - \$60.1 Million)</b>		

<b>Hydra 70 Rockets</b>	<b>43.5</b>	The FY 1991 Amended request funds for 10,000 Hydra 70 M257 ILLUM, and 109,000 Hydra 70 M274 Signature Practice rounds to support war reserves and training requirements. The Hydra 70 provides both attack and self-defense capabilities for Apache and modernized Cobra helicopters against personnel and material. The ILLUM Rocket procurement supports annual peacetime training and builds war reserves. Signature Practice Rockets are preferred for most training on instrumented ranges.
<b>Lightweight Multi-Purpose Weapon System</b>	<b>16.6</b>	The FY 1991 Amended request funds 11,000 AT-4 Weapon Systems to support funding training requirements. The Lightweight Multi-Purpose Weapon System (AT-4) is a shoulder-fired tactical munition designed for multiple roles against material and lightly armored vehicles. This weapon will supplement the M72E3 Light Anti-tank Weapon (LAW).
<b>MINES/COUNTERMINES (FY 1991 - \$81.7 Million)</b>		
<b>Mines/Countermines</b>	<b>81.7</b>	The FY 1991 Amended request supports funding to meet war reserve objectives. Included is the Volcano, the center piece of the Army mine program, a helicopter or ground dispensed mine system which contains both antipersonnel and antitank mines. Also included are the practice mines to support training with the Volcano dispensing system and the M68A2 Line Charge Inter, the (MICLIC) which provides realistic training in minefield breaching.

**ITEM BREAKOUT, FY 1991**  
 (\$ Millions)

TYPE      FY 1991      REMARKS

**OTHER (FY 1991, \$26.5 Million)**

<b>Grenades, All Types</b>	8.0	The FY 1991 Amended request funds practice and smoke grenades for both war reserves and training.
<b>Signals, All Types</b>	2.7	The FY 1991 Amended request funds colored smoke signals and smoke pots for both war reserves and training.
<b>Simulators, All Types</b>	10.2	The FY 1991 Amended request funds training requirements for various simulators. These devices lend battlefield realism to training exercises without the associated cost, safety and environmental impacts of live-fire training.
<b>Demolition Munitions</b>	5.6	The FY 1991 Amended request funds numerous demolition munitions to support training and range clearance requirements. This line includes demolition charges and other cratering charges, kits, blasting caps, igniters, and blasting time fuzes.
<b>MISCELLANEOUS (FY 1991 - \$94.6 Million)</b>		
<b>Nitroguanidine</b>	28.8	The FY 1991 Amended request funds continued production to meet Army requirements and achieve economic production rate at Sunflower Ammunition Plant, the only U.S. source for this critical ingredient. Nitroguanidine is a colorless, crystalline compound required in production of the triple-base propellant used in extended-range propelling charges for artillery ammunition.

**ITEM BREAKOUT, FY 1991**  
 (\$ Millions)

TYPE	FY 1991	REMARKS
<b>MISCELLANEOUS (CONT.)</b>		
Auto Components	27.8	The FY 1991 Amended request is required for major and minor maintenance and renovation of field stocks.
Other	38.0	The FY 1991 Amended request funds equipment unique to ammunition production/depot operations, a Host Nation Support agreement, spares and repair parts, and other small ammunition programs.

**FY 1991 WAR RESERVE AMMUNITION, TRAINING AMMUNITION AND NON-HARDWARE PROGRAMS**  
(\$ MILLIONS)

	FY 1990	FY 1991
War Reserve Ammunition	1040.0	688.9
Training Ammunition:	464.9	412.1
Non-Hardware Programs:	72.3	64.3
Total	1577.2	1165.3

In order to support worldwide training consumption and increase U.S. Army readiness, the following ammunition is being procured:

TRAINING AMMUNITION	QUANTITY (THOUSANDS)	DOLLARS * (THOUSANDS)
Cartridge, 5.56mm, Blank M200	136,045	15.0
Cartridge, 5.56mm, Ball M16-A2	136,145	35.2
Cartridge, 5.56mm, Ball M855 Linked	2,493	.8
Cartridge, 5.56mm, Plastic M862	3,129	1.1
Cartridge, 7.62mm, Blank Linked, M82/M13	13,102	3.5
Cartridge, 7.62mm, Special Match, M852	1,818	.8
Cartridge, Cal .45, Ball Wadcutter	696	.1
Cartridge, Cal .45, Match Grade	2,410	.4
Cartridge, Caliber .50 Ball M33	2,160	3.1
Cartridge, 20mm Linked TP, M55	1,280	4.4
Cartridge, 20mm Linked TP-T, M220	1,358	5.5
Cartridge, 25mm AP Training, M910	1,277	25.2
Cartridge, 30mm TP Linked, M788	841	9.2
Cartridge, 40mm TP M918 F/CEV	14	.4
Cartridge, 40mm Dummy F/MK19	29	.3
Cartridge, 40mm Practice, M781	538	.9
Cartridge, Mortar, 60mm, Smoke, M722	25	.2
Cartridge, Tank, 105mm, DS-TP, M724A1	34	6.5
Cartridge, Tank, 105mm, TP-T, M490A1	45	8.7
Cartridge, Tank, 120mm, TP-T, M831	43	41.2
Cartridge, Tank, 120mm, TPCSDS-T, M865	177	130.5

## TRAINING AMMUNITION (CONT.)

	QUANTITY (THOUSANDS)	DOLLARS (THOUSANDS)
Cartridge, Artillery, 105mm, Blank, M395	181	5.7
Projectile Artillery, 155mm, Trng, M804	203	32.6
Fuze, Artillery, Elc Time, M767	35	3.1
Line Charge Inert M68A2 (MIICLJC)	139	1.6
VOLCANO PRACTICE, M88	3	1.6
AT-4 Multi-purpose Weapon	11	12.1
Hydra 70 Rocket, Sig Prac, M274	109	36.0
Hydra 70 Rocket, ILLUM, M257	10	4.5
Rocket, Trg, Practice, 35mm	313	4.5
Cap, Blasting, M6 Spc Elec	57	.2
Cord, Detonating Reinforced Pl of film WTRP	2,106	.2
Fuze, Blasting Time M700	1,389	.2
Igniter, Fuze Blasting Time M60	127	.4
Fuze, Hand Grenade Practice, M228	918	1.4
Grenade IWR SMK SCR Red Phos UK LBA3	2	.6
Signal Kit Personnel Distress RDO M185	2	.1
Signal Kit Personnel Folige Peret Red	1	.1
Signal Smoke & Illuminating MK13 Mod 0	9	.2
Signal ILLUM Grd M127 Ser White Star Para	30	1.0
Simulator, Proj Airburst Liquid (SPAL) M11	617	.2
Simulator, Proj Airburst M74	220	4.1
Simulator, Booby Trap Flash M117	34	.1
Simulator, Hand Grenade M116 Series	48	.4
Simulator, Flash Artillery M21 (WESS	1,111	4.4
Simulator, Flash Artillery Mtg M24	1,658	1.0
Cartridge, 9mm, Ball	7,693	1.3
Opposing Forces Ammunition	-	2.1
Items less than \$2 Million	-	.7

\* Dollars may not add due to rounding.

**Department of the Army  
President's Budget  
JUSTIFICATION**

**Appropriation  
PROCUREMENT OF AMMUNITION, ARMY**

**FY 1991  
Budget**

**Budget Program**

**(\$ Thousands)**

<b>Activity 2 - Ammunition Production Base Support</b>	<b>Actual FY 1989</b>	<b>Actual FY 1990</b>	<b>Estimate FY 1991</b>
<b>Direct Budget Plan</b>	<b>\$278,787</b>	<b>\$331,880</b>	<b>\$259,081</b>

**Part 1 - PURPOSE AND SCOPE**

The FY 1991 Amended President's Budget contains an ammunition production base support program that provides for the support of plants in active production and required for mobilization; the establishment of initial-production facilities; modernization, and expansion of production capability for ammunition; modernization of Proving Grounds; layaway of industrial plants and equipment, which is the procedure associated with placing a previously active production facility or line into inactive status; and components for prove-out, which refers to the procedures associated with demonstrating that a production facility or line is capable of manufacturing the ammunition item. Also included in the program beginning in FY 1990 is funding for the maintenance of the inactive industrial facilities after they are laid away.

Part 2 - JUSTIFICATION OF FUNDS REQUESTED

Production Base Support Categorization (\$ Millions)	FY 1989	FY 1990	FY 1991
<b>Provision of Industrial Facilities (PIF)</b>	<b>173.6</b>	<b>233.3</b>	<b>134.7</b>
Production Support and Equipment			
Replacement (PS&ER)	(43.0)	(42.5)	(39.8)
Initial Production Facilities (IPF)	(0.0)	(13.9)	(10.0)
Modernization (MOD)	(84.0)	(154.8)	(59.0)
Expansion (EXP)	(46.6)	(23.0)	(25.9)
Proving Ground Modernization	1.0	2.0	4.0
Layaway of Industrial Facilities	19.6	28.0	40.5
Prove-out of Production Facilities	12.3	4.0	12.1
RDX Facility	72.3		
Maintenance of Inactive Facilities		64.6	67.8
<b>Ammunition Production Base Support Total</b>	<b>278.8</b>	<b>331.9</b>	<b>259.1</b>

ITEM BREAKOUT, FY 1991 (\$ Millions)	TYPE/REMARKS	FY 1991
	PROVISION OF INDUSTRIAL FACILITIES	134.647

**The FY 1991 Amended request of \$134.6 million contains the following projects:**

To correct safety deficiencies at various Army Ammunition Plants (AAP), \$8.6 million is requested. This amount will provide for upgrading of fire detection and suppression equipment in the tracer charging area, modernization of the primer assembly process and plant-wide upgrading of the lightning protection system at Lake City AAP (Independence, Missouri). In addition, at Radford AAP (Radford, Virginia), the existing two-wire electrical system will be upgraded; at Indiana AAP (Charlestown, Indiana), a deluge system will be provided on two load lines; and a portable high-speed deluge system for use at several plants will be provided.

At Holston AAP (Kingsport, Tennessee), \$3.1 million is requested to construct a two-lane bridge across the Holston River from the production area to the explosive storage area where all on-plant storage is located. The existing bridge, constructed in 1943, has deteriorated to a point of being unsafe and structurally incapable of carrying a fully loaded trailer.

The main steam lines at Holston AAP are over 40 years old and deteriorated. \$1.5 million is requested to relocate approximately 400 feet of line and replace supports, traps, valves, insulate the headers, and demolish/rehabilitate the collateral air lines.

To enhance personnel safety in the pyrotechnic manufacturing area at Lone Star AAP (Texarkana, Texas) and Longhorn AAP (Marshall, Texas), \$16.6 million is requested. This project will provide for the installation of remotely operated mixers, granulators and dryers for pyrotechnic compositions; remote handling equipment; and an improved fire suppression system.

To provide adequate storage of Nitroguanidine, \$2.2 million is requested to construct seven concrete arched igloos to replace defective steel arched igloos at Sunflower AAP (Lawrence, Kansas).

At Louisiana AAP (Shreveport, Louisiana), the projectile metal parts line is experiencing significant downtime due to a worn machining chip conveyor system. Replacement of this system at a cost of \$2.4 million will also correct some environmental deficiencies.

ITEM BREAKOUT, FY 1991  
(\$ Millions)

TYPE/REMARKS

PROVISION OF INDUSTRIAL FACILITIES (CONT.)

FY 1991

In an effort to meet environmental laws and regulations, \$12.0 million is requested to restore land and equipment that have been damaged, contaminated, or disturbed by activities at the ammunition plants and modify production operations and processes to meet the requirements of various environmental laws and regulations.

For hazardous waste disposal at Army ammunition installations, \$3.6 million is requested.

To acquire equipment and update existing systems used for small caliber ammunition inspection and quality control at Lake City AAP, \$6.5 million is requested.

To reduce waste and permit continued, uninterrupted depleted uranium penetrator manufacture at Aerojet Ordnance Company, Jonesborough, Tennessee, \$2.5 million is requested.

In support of the Air Force Sensor Fuzed Weapon program, \$10.0 million is requested for Textron Defense Systems, Wilmington, MA. Funding is for production transition program in which high risk tooling/test equipment and/or critical production processes will be demonstrated, run-off qualification piece parts/components produced, and sub-system qualification tests conducted.

Engineering design funds in the amount of \$25.9 million are required for initiation and/or continuation of construction design criteria, equipment and construction concept final design, process design specifications, design related studies; and other design related work necessary to assure efficient and timely execution of facility projects.

Also included in the FY 1991 request is \$39.8 million for the necessary production support and equipment replacement for plants in active production.

ITEM BREAKOUT, FY 1991  
(\$ Millions)

TYPE/REMARKS

LAYAWAY OF INDUSTRIAL FACILITIES

The FY 1991 Amended request is for the protection and preservation of equipment and facilities no longer required for active production, but which must be retained for future peacetime or mobilization production needs. Included are funds for the partial layaway of Mississippi AAP (Picayune, Mississippi) and the layaway of lines where production will end at various ammunition plants.

COMPONENTS FOR PROVE-OUT

12.100

This line provides for the prove-out and acceptance of prior year modernization, expansion and initial production facilities. Funds are used to assure that the facility is capable of producing an acceptable end product, manufacturer warranties are met, and the facility is capable of producing at the designed rate.

The FY 1991 prove-out program includes nitric acid concentration (NAC)/sulfuric acid concentration (SAC) lines deficiency corrections at Badger AAP (Barbo, Wisconsin), Composition A line modernization at Holston AAP and CASBL deficiency correction at Radford AAP.

PROVING GROUND MODERNIZATION

This program will modernize and upgrade existing test instrumentation to conduct production acceptance testing of Army ammunition components. This effort will replace obsolete, unreliable, or economically unrepairable test equipment and instrumentation currently in use. This will result in more accurate reliable data and faster turn around of the production items being tested. This will also allow for earlier release of product, avoiding the requirement for additional storage facilities, and reduce waste and scrap resulting from stopping faulty production. Jefferson Proving Ground is on the proposed base closure list for Department of Defense installations. The mission performed at Jefferson Proving Ground will be transferred to Yuma Proving Ground and the modernization funding will be required there.

ITEM BREAKOUT, FY 1991  
(\$ Millions)

TYPE/REMARKS

MAINTENANCE OF INACTIVE FACILITIES

FY 1991

67.800

In FY 1990, the Congress appropriated funding for the Maintenance of Inactive Ammunition Industrial Facilities as a new line item in the Procurement of Ammunition, Army Appropriation. In FY 1989 and prior years this program had been financed in the Operation and Maintenance, Army Appropriation. The funds provide for the maintenance of laidaway portions of active plants including utilities, buildings, nonseverable plant equipment, administration, surveillance, inspection, protection, and maintenance and repair of buildings, grounds, railroads, and integral equipment. The program also supports retention, maintenance and protection of the government-owned, inactive plants and inactive lines of active plants which are needed to assure emergency production capacity for mission essential material.

The program supports maintenance, protection, repair, and rebuild of government-owned plant equipment packages including: industrial plant equipment, other plant equipment, special tooling and special test equipment. These plant equipment packages are maintained in anticipation of future production and mobilization requirements of ammunition. Facilities maintained include nine inactive coco plants, inactive lines at 17 active plants (three GOGO and 14 GOCO), and inactive lines at 26 contractor plants.

PROCUREMENT OF AMMUNITION, ARMY

Section 3

Comparison of Programming Requirements and Financing

Comparison of FY 1990 program requirements as reflected in the FY 1990/1991 Amended Budget with FY 1990 program requirements as shown in the FY 1991 Budget Estimate.

Comparison of FY 1990 financing as reflected in the FY 1990/1991 Amended Budget with FY 1990 financing as shown in the FY 1991 Budget Estimate.

Comparison of FY 1989 program requirements as reflected in the FY 1990/1991 Amended Budget with FY 1989 program requirements as shown in the FY 1991 Budget Estimate.

Comparison of FY 1989 financing as reflected in the FY 1990/1991 Amended Budget with FY 1989 financing as shown in the FY 1991 Budget Estimate.

COMPARISON OF FY 1990 PROGRAM REQUIREMENTS  
AS REFLECTED IN THE FY 1990/1991 AMENDED BUDGET  
WITH THE FY 1990 PROGRAM REQUIREMENTS AS SHOWN  
IN THE FY 1991 BUDGET ESTIMATE  
SUMMARY OF REQUIREMENTS (In Thousands of Dollars)

	FY 1990 Requirements Per FY 1990/1991 Amended Budget	FY 1990 Requirements Per FY 1991 Budget Estimate	Increase (+) or Decrease (-)
Activity 1 - Ammunition	1,530,543	1,577,163	+46,620
Activity 2 - Modification of Ammunition/ Production Base Support	174,257	331,880	+157,623
 TOTAL	 1,704,800	 1,909,043	 +204,243

EXPLANATION BY ACTIVITY

Activity 1 - Ammunition - The net increase resulted from Congressional adjustments to 5.56mm (3,500), 7.62mm ((\\$10,000), 20mm (\\$10,000), 25mm (\\$10,000), 40mm (\\$15,000), 4.2 in Mortar (\\$-11,253), 35mm Tank (\\$-11,800), 105mm (\\$-36,700), 120mm (\\$42,300), 155mm (\\$146,155), Fuze (\\$-14,840), Mines (\\$-40,621), AT-4 (\\$10,079), and Demolition Munitions (\\$5,000). Adjustments were also required for an Military Pay reprogramming (\\$-200) and a transfer of deferred programs (\\$-90,000).

Activity 2 - Ammunition Production Base Support - Net increase resulted from Congressional adjustments to Provision of Industrial Facilities (\\$120,000), Components for Prove-Out (\\$-3,000) Lawaway of Industrial Facilities (\\$-11,977) and Industrial Preparedness (\\$64,600). Adjustments were also required for a Drug Interdiction Reprogramming (\\$-12,000).

**COMPARISON OF FY 1990 FINANCING AS REFLECTED  
IN THE FY 1990/1991 AMENDED BUDGET WITH FY 1990 FINANCING  
AS SHOWN IN FY 1991 BUDGET ESTIMATE**

(In Thousands of Dollars)					
	FY 1990 Financing FY 1990/1991	FY 1990 Financing Per FY 1991	FY 1990 Increase (+) or Decrease (-)		
	Amended Budget	Budget Estimate			
<b>Program Requirements (Total)</b>	1,733,600	1,949,043	+215,443		
Program Requirements (Service Account)	(1,704,800)	(1,909,043)	(+202,243)		
Program Requirements (Reimbursable)	(28,800)	(40,000)	(+11,200)		
Less: Anticipated reimbursements	~28,800	-40,000	-11,200		
Add: Available to finance subsequent year budget plans		+90,000	+90,000		
<b>BUDGET AUTHORITY</b>					
Appropriation	1,704,800	1,999,043	+294,243		

**EXPLANATION:**

The reimbursable program (offsetting collections) increased by \$11,200 because of additional customer requirements.

The unobligated balance available to finance subsequent year budget plans represents an FY 1990 transfer of deferred funds.

**COMPARISON OF FY 1989 PROGRAM REQUIREMENTS  
AS REFLECTED IN THE FY 1990/1991 AMENDED BUDGET  
WITH THE FY 1989 PROGRAM REQUIREMENTS AS SHOWN  
IN THE FY 1991 BUDGET ESTIMATE  
SUMMARY OF REQUIREMENTS (In Thousands of Dollars)**

Appropriation Procurement of Ammunition, Army	FY 1989	FY 1989	Increase (+) or Decrease (-)
	Requirements Per FY 1990/1991	Requirements Per FY 1991	
	Amended Budget	Budget Estimate	
Activity 1 - Ammunition	1,733,834	1,741,548	+7,714
Activity 2 - Ammunition Production Base Support	271,361	278,787	+7,426
TOTAL	2,005,195	2,020,335	+15,140

**EXPLANATION BY ACTIVITY**

**Activity 1 - Ammunition** - The increase results from Congressional denial of Ammunition source for O&M, A Readiness reprogramming (\$6,917) and below-threshold reprogramings (\$797).

**Activity 2 - Ammunition Production Base Support** - The net increase results from Congressional denial of Ammunition source for O&M, A Readiness reprogramming (\$1,083), Environmental reprogramming (\$7,140) and below-threshold reprogramings (\$-797).

COMPARISON OF FY 1989 FINANCING AS REFLECTED  
IN THE FY 1990/1991 AMENDED BUDGET WITH FY 1989 FINANCING  
AS SHOWN IN FY 1991 BUDGET ESTIMATE

	(In Thousands of Dollars)				
	FY 1989	FY 1989	Per	Increase (+)	Decrease (-)
	Financing	Financing	FY 1991	or	
	FY 1990/1991	Amended Budget	Budget Estimate		
<b>Program Requirements (Total)</b>	<b>2,043,995</b>	<b>2,058,236</b>	<b>+14,241</b>		
Program Requirements (Service Account)	(2,005,195)	(2,020,335)	(+15,140)		
Program Requirements (Reimbursable)	(38,800)	(37,901)	(-899)		
<b>Less:</b>					
Anticipated reimbursements	-38,800	-37,901	+899		
Reprogramming from/to prior year budget plans					
Add:					
Unobligated balance lapsing		-48	-48	+48	
<b>BUDGET AUTHORITY</b>					
<b>Appropriation</b>	<b>2,005,195</b>	<b>2,020,335</b>	<b>+15,140</b>		
<b>EXPLANATION:</b>					

The reimbursable program (offsetting collections) decreased by \$899 because orders did not materialize as anticipated.

The reprogramming to/from prior year budget plans was adjusted: reduction due to unobligated balance lapsing (\$48).